

RESPONSE UNDER 37 C.F.R. §1.111
U.S. APPLN. NO.: 09/822,838

REMARKS

Claims 1-11 are pending in the application. Claims 1, 3-5 and 9-11 are rejected under 35 U.S.C. § 103(a) as being unpatentable over U.S. Patent No. 5,291,282 (issued to Nakagawa; hereinafter “Nakagawa”) and U.S. Patent No. 6,771,813 (issued to Katsuyama; hereinafter “Katsuyama”) and further in view of U.S. Patent No. 3,688,266 (issued to Watanabe *et al.*; hereinafter “Watanabe”). Claims 2 and 6 are rejected under 35 U.S.C. § 103(a) as being unpatentable over Nakagawa, Katsuyama, Watanabe and further in view of U.S. Patent No. 6,574,374 (issued to Acharya; hereinafter “Acharya”). Applicant submits the arguments below in traversal of the claim rejections.

Rejection of Claims 1, 3-5 and 9-11 under § 103(a) over Nakagawa and Katsuyama and further in view of Watanabe

Applicant respectfully submits that claim 1 is patentable because Nakagawa, Katsuyama and Watanabe fail to teach, suggest or provide motivation for:

A method of describing pattern repetitiveness of an image comprising the steps of:

- (a) projecting an image on a predetermined axis having a predetermined direction;
- (b) decomposing the projected image down one level;
- (c) increasing a threshold value if a pattern quantizing value is retained, and denoising the decomposed data; and
- (d) describing pattern repetitiveness of the image using the pattern quantizing value of the denoised data and the threshold value used for denoising.

For example, Nakagawa, Katsuyama and Watanabe fail to teach, suggest or provide motivation for increasing a threshold value if a pattern quantizing value is retained, and denoising the decomposed data, in combination with other elements of the claim.

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In the Office Action, the Examiner cites column 1, lines 45-67 of Watanabe as teaching the claimed step of increasing a threshold value if a pattern quantization value is retained. Column 1, lines 43-47 of Watanabe cited by the Examiner mention pattern recognition systems where the photoelectric conversion section is operated at a variable threshold voltage level to distinguish between the letter portions and other blank spaces of a record carrier. Column 1, lines 45-67 of Watanabe disclose that if the letters to be read out poorly contrast with the background space, threshold voltage level of a quantization pattern is reduced. Further, Watanabe discloses that the threshold voltage level of a quantization pattern can be increased if the contrast is high. Although Watanabe discloses raising a threshold voltage level and claim 1 also recites increasing a threshold value, the threshold voltage level disclosed in Watanabe is the threshold voltage level for a quantization pattern. In contrast, the threshold value recited in the claim relates to the threshold value used for denoising, not for pattern quantizing.

Furthermore, step (c) explicitly requires the condition of determining if a pattern quantizing value is retrained. If this condition is satisfied, then a threshold value is increased. In contrast, there is nothing in Watanabe which makes any mention of determining whether a pattern quantizing value is retained. Rather, the only condition that is determined in the sections cited by the Examiner is whether the contrast is low or high, not whether the contrast is retained. Further, this contrast cannot possibly correspond to the claimed pattern quantization value because the contrast level affects the threshold voltage level for quantization. Therefore, the threshold voltage level for quantization in Watanabe cannot possibly correspond to the claimed pattern quantizing value.

In view of the above, Applicant submits that step (c), in combination with other elements of claim 1, is not taught or suggested by Nakagawa, Katsuyama and Watanabe, alone or in combination, and one of ordinary skill in the art would not have been motivated to combine and modify the cited

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references to produce this feature of the claimed invention. Accordingly, Applicant respectfully submits that claim 1 is patentable.

Applicant also submits that claims 3-4 and 11, which depend from or ultimately depend from claim 1, are patentable for at least the reasons submitted for claim 1.

Independent claims 5 and 10 recite similar features to those discussed above and thus, Applicant submits that claims 5 and 10 are patentable for reasons similar to those submitted for claim 1.

Rejection of Claims 2 and 6 under § 103(a) over Nakagawa, Katsuyama, Watanabe and further in view of Acharya

Regarding claims 2 and 6, which depend from claims 1 and 5, Applicant submits that these claims are patentable for at least the reasons submitted for claims 1 and 5 and because Acharya fails to make up for the deficiencies of Nakagawa, Katsuyama and Watanabe.

In view of the above, reconsideration and allowance of this application are now believed to be in order, and such actions are hereby solicited. If any points remain in issue which the Examiner feels may be best resolved through a personal or telephone interview, the Examiner is kindly requested to contact the undersigned at the telephone number listed below.

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Respectfully submitted,



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